

carbon layer being less than the SP3 content of the first carbon layer, said second carbon layer being amorphous; and
depositing a lubricant layer on said second carbon layer.

2. (Original) Method of claim 1 wherein the second carbon layer comprises less than about 50% SP3 carbon.
3. (Original) Method of claim 2 wherein the second carbon layer comprises more than about 30% SP3 carbon.
4. (Original) Method of claim 1 wherein said second carbon layer has a thickness less than or equal to about 1 nm.
5. (Original) Method of claim 1 wherein said second carbon layer is between 0.1 and 1 nm thick.
6. (Canceled) ~~Method of claim 1 further comprising a lubricant layer.~~
7. (Original) Method of claim 1 wherein the second carbon layer is formed by sputtering and the first carbon layer is formed by CVD, PECVD, IBD or cathodic arc deposition.

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8. (Original) Method of claim 1 wherein the first and second carbon layers are formed by sputtering.

9. (Original) Method of claim 8 wherein said depositing of said first carbon layer comprises:

applying a voltage to a sputtering target, said sputtering target comprising carbon, said voltage being applied by a power supply in the form of pulses, said pulses comprising at least a first portion and a second portion, the voltage applied during said second portion being more negative than that applied during said first portion, wherein a first sub-portion of said second portion is more negative than a second sub-portion of said second portion.

10. (Currently Amended) A magnetic ~~disk~~ recording medium comprising:

a substrate;

a magnetic layer formed on said substrate;

a first carbon layer formed on said magnetic layer, said first carbon layer comprising predominantly SP3 carbon; ~~and~~

a second carbon layer formed on said first carbon layer, said second carbon layer comprising about 60% or less SP3 carbon, the SP3 content of said second carbon layer being less than the SP3 content of the first carbon layer; and

a lubricant layer on said second carbon layer.

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11. (Currently Amended) Recording medium ~~Disk~~ of claim 10 wherein the second carbon layer comprises less than 50% SP3 carbon.
12. (Currently Amended) Recording medium ~~Disk~~ of claim 10 wherein said wherein said second carbon layer is a flash carbon layer.
13. (Currently Amended) Recording medium ~~Disk~~ of claim 13 wherein said second carbon layer is between 0.1 and 1.0 nm thick.
- 14-41. (Canceled)
42. (New) Recording medium of claim 10 wherein said first carbon layer is less than 5 nm thick and said second carbon layer is less than 1 nm thick.
43. (New) Recording medium of claim 10 wherein said first carbon layer comprises 70% or greater SP3 bonding.
44. (New) Recording medium of claim 10 wherein said first carbon layer comprises about 80% or greater SP3 bonding.
45. (New) Recording medium of claim 10 wherein said first carbon layer has a density greater than about 2.1 grams/cc.

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46. (New) Recording medium of claim 10 wherein said first carbon layer has a refractive index greater than 2.0.
47. (New) Recording medium of claim 10 further comprising a lubricant on said second carbon layer.
48. (New) A magnetic recording medium comprising:
- a substrate;
 - a magnetic layer formed on said substrate;
 - a first carbon layer formed on said magnetic layer, said first carbon layer being formed by sputtering during which a voltage is applied to a sputtering target, said sputtering target comprising carbon, said voltage being applied by a power supply in the form of pulses, said pulses comprising at least a first portion and a second portion, the voltage applied during the second portion being more negative than that applied during the first portion, wherein a first sub-portion of said second portion is more negative than a second subportion of said second portion;
 - a second carbon layer formed on said first carbon layer, said second carbon layer comprising about 60% or less SP3 carbon, the SP3 content of said second carbon layer being less than the SP3 content of the first carbon layer; and
 - a lubricant layer on said second carbon layer.
49. (New) Recording medium of claim 48 wherein said first carbon layer is less than 5 nm thick and said second carbon layer is less than 1 nm thick.

50. (New) Recording medium of claim 48 wherein said first carbon layer comprises about 70% or greater SP3 bonding.

51. (New) Recording medium of claim 48 wherein said first carbon layer comprises 80% or greater SP3 bonding.

52. (New) Recording medium of claim 48 wherein said first carbon layer has a density greater than about 2.1 grams/cc.

53. (New) Recording medium of claim 48 wherein said first carbon layer has a refractive index greater than 2.0.

54. (New) Recording medium of claim 48 further comprising a lubricant on said second carbon layer.

55. (New) Recording medium of claim 10 wherein said first carbon layer is substantially thicker than said second carbon layer.

56. (New) Recording medium of claim 48 wherein said first carbon layer is substantially thicker than said second carbon layer.

57. (New) Recording medium of claim 10 wherein the first carbon layer has a lower surface energy than the second carbon layer.

58. (New) Recording medium of claim 48 wherein the first carbon layer has a lower surface energy than the second carbon layer.

59. (New) Recording medium of claim 10 further comprising an underlayer formed between said substrate and said magnetic layer.

60. (New) Recording medium of claim 48 further comprising an underlayer formed between said substrate and said magnetic layer.